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PATENT
Docket No. SJO920030101US1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Donald M. Connelly Jr. et al.	
Serial No.:	10/828,784	Group Art
Filed:	April 21, 2004	Unit: 2835
For:	STORAGE DEVICE ENCLOSURE	
Examiner:	Corey M. Broussard	

APPEAL BRIEF

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Examiner:

The Appellants filed a timely Notice of Appeal on October 20, 2005 in response to the Final Office Action mailed July 20, 2005 and the Advisory Action mailed September 22, 2005. The Appellants appealed the rejection of and objections to pending claims 1, 3-11, and 13-20. The Examiner responded by reopening prosecution using the same prior art in an Office Action mailed March 6, 2006. This Appeal Brief is being filed under the provisions of 37 C.F.R. § 41.37, reinstating the previous appeal. A Notice of Appeal reinstating the previous appeal was filed on June 6, 2006. The filing fee set forth in 37 C.F.R. § 41.20(b)(2) of \$500.00 was previously charged to Deposit Account No. 09-0466 and is applicable to this appeal as is the notice of appeal fee of \$500. The Commissioner is hereby authorized to charge payment of any additional fees associated with this communication, or to credit any overpayment, to Deposit

Account No. 09-0466.

1. REAL PARTY IN INTEREST

The real party in interest is the assignee, International Business Machines Corporation, Armonk, New York.

2. RELATED APPEALS AND INTERFERENCES

A Notice of Appeal for this application was timely filed on October 20, 2005. While the Appeal Brief was found persuasive, another Office Action was mailed on March 6, 2006 (hereinafter “Office Action”) reopening prosecution citing the same prior art with different grounds for rejection. There are no other related appeals, interferences, or judicial proceedings.

3. STATUS OF CLAIMS

The Office Action mailed March 6, 2006 rejected Claims 1, 3-11, and 13-30 and objected to Claims 13 and 14. Claims 1, 3-11, and 13-30 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement, and 35 U.S.C. § 112, second paragraph, for being indefinite. Claims 21, 24, 25, and 27 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 6,445,587 to Pavol (hereinafter “Pavol”). Claims 1, 3-11, 13-20, 22, 23, 26, and 28-30 stand rejected under 35 U.S.C. § 103(a) as being obvious in view of Pavol in view of one or more of U.S. Patent No. 5,858,509 to Polch (hereinafter “Polch”), U.S. Patent No. 6,209,842 to Anderson et al. (hereinafter “Anderson”), and U.S. Patent No. 6,775,142 to Bell et al. (hereinafter “Bell”). Claims 13 and 14 are objected to for being improper for depending on a cancelled claim. The Appellants appeal the rejection of Claims 1, 3-11, and 13-30 and the objection to Claim 13 and 14. The Appellants proposed amendments to Claims 13 and 14 in the request for reconsideration mailed September 14, 2005.

4. STATUS OF AMENDMENTS

According to the Advisory Action mailed September 22, 2005, proposed amendments to Claims 13 and 14 are not entered because the Examiner maintains that the Claims raise new issues. These amendments were not entered because it is asserted that they would raise new issues and require a further search.

5. SUMMARY OF CLAIMED SUBJECT MATTER

The claimed subject matter deals with enclosures for storage devices. Application of Connelly et al., filed April 21, 2004 (hereinafter “Application”) at ¶ 11. Specifically, the claimed invention comprises damped elements to curtail disk drive vibration and a keyed bezel to prevent damage to interface connections. *Id.* The claimed invention is configured to overcome self-induced vibration and vibrations caused by transmission from other disk drives in an enclosure chassis. *Id.* at ¶ 13.

Conventional storage device enclosures suffer from the effects of multiple storage devices connected in a rigid manner to common or shared supports such as a mounting wall. *Id.* at ¶ 4. The combined vibrations transmitted along the shared supports results in write inhibits, soft errors, and slow responses from the storage devices. *Id.* These types of errors or problems can result in false determinations that a storage device is faulty when the cause is not a storage device defect but instead is a result of combined vibration propagation between storage devices. *Id.* at ¶ 5. The density of data stored on storage devices exacerbates the problem. *Id.* at ¶ 6. Conventional solutions include damping springs between storage device carriers and the chassis. *Id.* at ¶ 7. However, manufacturing and installing such damping springs can prohibitively increase the costs of providing these conventional solutions. *Id.* Embodiments of the present invention include an enclosure, systems, a method, and an apparatus for storage device enclosures.¹ See e.g. *Id.* at Claims 1, 9, 18, 21, 24.

The following quotation of Claim 1, includes reference numerals and parenthetical references to representative examples of the elements and components recited in Claim 1 in compliance with 37 CFR 41.37(c)(1)(v). Independent Claim 1 states:

1. An enclosure 100 (Application at amended ¶ 29, replacement Fig. 1) for storing at least one storage device (*Id.*), comprising:
an enclosure chassis 102 (*Id.* ¶29, Replacement Fig. 1);

¹ Although the Appellants have summarized embodiments of the present invention, the present invention is defined by the claims themselves. The Appellants’ summary is not intended to limit the scope of the claims or individual claim elements in complying with the appeal brief requirements under 37 C.F.R. § 41.37(c)(v).

a mounting surface 112 (*Id.* ¶29, Replacement Fig. 1) oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay 114 (*Id.*), the mounting surface configured to receive a horizontally oriented storage device carrier 300 (*Id.* at ¶ 30, Fig. 3, 1), the mounting surface having a first layer 118 (*Id.* at ¶ 32, Replacement Fig. 1) and a second layer 120 (*Id.* at ¶ 32, Replacement Fig. 1);

a viscoelastic layer 116 (*Id.* at ¶ 32, Replacement Fig. 1) disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface (*Id.*); and

a receiver 115 (*Id.* at ¶ 29, Replacement Fig. 1) secured to the mounting surface (*Id.* at replacement Fig. 1) and configured to retain a first storage device carrier substantially perpendicular to the mounting surface (*Id.*).

The following references are illustrative of an embodiment of an enclosure. *See id.* at amended ¶ 29, replacement Fig. 1. The enclosure includes an enclosure chassis. *Id.* A mounting surface is vertically oriented within the enclosure chassis to form one wall of a drive bay. *Id.* The mounting surface receives a horizontally oriented storage device carrier. *Id.* at ¶ 30, Fig. 1. The mounting surface includes a first layer and a second layer which sandwich a viscoelastic layer between them. *Id.* at ¶ 32, Fig. 1. The viscoelastic layer damps vibration propagation. *Id.*

The enclosure also includes a receiver secured to the mounting surface. *Id.* The receiver retains a first storage device carrier in a perpendicular orientation with respect to the mounting surface. *Id.* Advantageously, the claimed enclosure includes a mounting surface and receiver that cooperate to substantially isolate one storage device from other storage devices in the enclosure to minimize the affects of vibration propagation within the enclosure.

Figure 1, submitted as a replacement sheet, illustrates one embodiment of mounting surface and receiver in accordance with the claimed invention. *Id.* at replacement Fig. 1. The mounting surface 112 includes a first layer 118 and second layer 120 having a viscoelastic layer 116 disposed between them. *Id.* The viscoelastic layer provides damping of vibrations between the two layers. *Id.* at ¶ 32. The mounting surface 112 includes a receiver 115. *Id.* at ¶ 29. The receiver 115 may be secured to, or formed as part of, the mounting surface 112. *Id.* The receiver 115 positions and orients the storage device carrier relative to the mounting surface 112. *Id.* In certain embodiments, a storage device carrier is secured to a single mounting surface 112 by way of a receiver 115. *Id.* The receiver 115 may comprise a pair of rails. *Id.*

Claims 5, 6, 13, and 14 further clarify the isolation function of the receivers 115. *Id.* at Claims 5, 6, 13, 14. In Claims 5 and 13, a first storage device carrier is mounted to one side of the mounting surface 112 and a second storage device carrier is mounted to an opposite side of the mounting surface 112. *Id.* at Claims 5, 13. Such a configuration permits vibrations from the first and second storage device carriers to cancel each other out. Claims 6 and 14 recite an embodiment in which the first storage device carrier and second storage device carrier are mounted to the same side of the mounting surface 112. *Id.* at Claims 6, 14. Alternatively, a storage device carrier may be secured to a pair of mounting surfaces 112 by way of receivers 115. The various configurations for the mounting surface 112 and receivers 115 permit different degrees of isolation for storage device carriers to minimize vibration propagation.

The following quotations of Claims 9, 18, 21, and 24, include reference numerals and parenthetical references to representative examples of the elements and components recited in Claims 9, 18, 21, and 24 in compliance with 37 CFR 41.37(c)(1)(v). Independent Claims 9, 18, 21, and 24 state:

9. A system for storing at least one storage device (Application at replacement Figs. 1, 5, Figs 2, 3, 6, 7), comprising:

an enclosure chassis 102 (*Id.* ¶29, Replacement Fig. 1);
a mounting surface 112 (*Id.* ¶29, Replacement Fig. 1) oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay (*Id.*), the mounting surface having a first layer 118 (*Id.* at ¶ 32, Replacement Fig. 1) and a second layer 120 (*Id.* at ¶ 32, Replacement Fig. 1) and a viscoelastic layer 116 (*Id.* at ¶ 32, Replacement Fig. 1) disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface (*Id.* at ¶ 32, Fig. 1);

a first and second storage device carrier 300 (*Id.* at ¶ 30, Fig. 3, 1) configured to retain a storage device therein (*Id.* at amended ¶ 29, replacement Fig 1); and

a first and second receiver 115 (*Id.* at ¶ 29, Replacement Fig. 1) secured to the mounting surface (*Id.*), the receivers configured to receive and retain the storage device carriers substantially perpendicular to the mounting surface (*Id.*).

18. A system for storing at least one storage device (*Id.* at replacement Figs. 1, 5, Figs 2, 3, 6, 7), comprising:

an enclosure chassis 102 (*Id.* at ¶ 29, Replacement Fig. 1);
a mounting surface 112 (*Id.* ¶29, replacement Fig. 1) oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay 114 (*Id.*), the mounting surface having a first layer 118 (*Id.* at ¶ 32, Replacement Fig. 1) and a

second layer 120 (*Id.* at ¶ 32, Replacement Fig. 1) and a viscoelastic layer 116 (*Id.* at ¶ 32, Replacement Fig. 1) disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface (*Id.* at ¶ 32, Fig. 1), the mounting surface configured to receive and retain less than three storage device carriers substantially perpendicular to the mounting surface (*Id.* at replacement Fig. 1);

an interface shelf 122 (*Id.* at ¶¶ 29, 31, Fig. 1) oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf;

a storage device carrier 300 (*Id.* at ¶ 30, Fig. 3, 1) including a bezel 304 (*Id.* at ¶ 41, Fig. 6), the storage device carrier configured to retain a storage device therein, the storage device having a storage device interface (*Id.* at ¶¶ 41-45, Figs. 1, 6, 7); and

a key 604 (*Id.* at ¶ 42, Fig. 6 and 7) removably secured to at least one of two positions on the bezel, such that placement of the key into one of the two positions prevents the storage device interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis (*Id.*).

21. A method for reducing vibration originating from at least one storage device (*Id.* at amended ¶ 29, replacement Fig. 1.), comprising the steps of:

providing an enclosure chassis 102 (*Id.* ¶ 29, replacement Fig. 1) configured to store at least one storage device (*Id.*);

providing a mounting surface 112 (*Id.* ¶ 29, replacement Fig. 1) oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay 114 (*Id.* ¶ 29, replacement Fig. 1), the mounting surface configured for receiving a horizontally oriented storage device carrier 300 (*Id.* at ¶ 30, Fig. 3, 1);

providing a first layer 118 on the mounting surface (*Id.* at ¶ 32, Fig. 1);

providing a second layer 120 on the mounting surface (*Id.*); and

providing a viscoelastic layer 116 (*Id.* at ¶ 32, Replacement Fig. 1) disposed between the first and second layer of the mounting surface for reducing vibration propagation throughout the mounting surface (*Id.*); and

providing an interface shelf 122 (*Id.* at ¶¶ 29, 31, Fig. 1) oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf (*Id.* at ¶ 29, 31, Fig. 1).

24. An apparatus for reducing vibration originating from at least one storage device (*Id.* at amended ¶ 29, replacement Fig. 1.), comprising:

an enclosure chassis 102 (*Id.* ¶ 29, replacement Fig. 1) configured to store at least one storage device (*Id.*);

a mounting surface 112 (*Id.* ¶ 29, replacement Fig. 1) oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay (*Id.*), the

mounting surface configured to receive less than three horizontally oriented storage device carriers 300 (*Id.* ¶30 at Fig. 3) and having a damping means 116 (*Id.* at ¶ 32, Replacement Fig. 1) for damping the vibrational energy generated by the storage device and received by the mounting surface (*Id.* at ¶ 32, Fig. 1); and

an interface shelf 122 (*Id.* at ¶¶ 29, 31, Fig. 1) oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf (*Id.* at ¶¶ 29, 31, Fig. 1).

The system of Claim 9 includes substantially the same subject matter as that described above in relation to Claim 1. *Id.* at Claims 1, 9, amended ¶ 29, ¶¶ 30, 32, Fig. 1. The system of Claim 18, method of Claim 21, and apparatus of Claim 24 include substantially the same elements as those described above in relation to Claim 1. *Id.* at Claims 1, 18, 21, 24. In addition, Claims 18, 21, and 24 recite an interface shelf oriented horizontally and coupled to the enclosure such that the interface shelf isolates storage device bays above and below the interface shelf. *Id.* at Claims 1, 18, 21, 24.

Figure 1 illustrates the interface shelf 122. *Id.* at Fig. 1. The interface shelf 122 includes a void and separates upper drive bays from lower drive bays such that inter-bay vibration propagation is inhibited by the void created by the interface shelf 122. *Id.* at ¶ 31. The interface shelf 122 improves stiffness of the enclosure chassis 102. *Id.* at ¶ 31.

Claims 10, 17, 19, 20, and 23 recite clip-on damped springs 200 that resiliently couple the storage device carrier 300 to the mounting surface 112. *Id.* at ¶ 35. The clip-on damped spring 200 assists in coupling the storage device carrier 300 to the mounting surface 112. *Id.* at ¶ 12, 35. Figures 2a, 2b, and 3 illustrate embodiments of clip-on damped springs. *Id.* at ¶ 35. Specifically, the clip-on damped springs comprise top and bottom elements 206, 208 with a viscoelastic element 210 in between. *Id.* at ¶ 35, Claims 17, 20, 23.

Additionally, an embodiment of the present invention includes an apparatus claimed in means plus function format under 35 U.S.C. § 112, sixth paragraph. Examples of the structure, material, or acts corresponding to the means recited in Claims 24, 25, and 27-30 are referenced below. With regard to Claims 24 and 25, the mounting surface 112, with the viscoelastic element 116 between a first element 118 and a second element 120, is one example of the damping means. *Id.* at ¶ 32, Fig. 1. With regard to Claim 27, the receiver 115 is one example of

the receiving means. *Id.* at amended Fig. 1, amended ¶ 29, ¶ 12. With regard to Claims 28-30, the key 604 is one example of the keying means. *Id.* at Figs. 6, 7, ¶¶ 42, 44, 45.

Consequently, the claimed invention includes a receiver and mounting surface cooperate to facilitate isolation of one storage device from other storage devices in the enclosure to minimize the effects of vibration propagation within the enclosure. In addition, the claimed invention includes a layer of the mounting surface that is viscoelastic to further enhance vibration damping. The claimed invention also includes an interface shelf that further isolates upper drive bays from lower drive bays to reduce vibration propagation. Finally, the clip-on damped springs assist in securing storage device carriers within drive bays and in damping vibrations because of a viscoelastic inner layer.

6. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

I. Whether the Examiner improperly rejected Claims 1, 3-11, and 13-30 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement, and 35 U.S.C. § 112, second paragraph, as being indefinite, where the term “mounting surface” is a clearly defined structure in the specification and one of ordinary skill in the art would recognize how to construct the mounting surface.

II. Whether the Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) for Claims 1, 3-11, 13-20, 22, 23, 26, and 28-30 where the limitations of the claims are not taught or suggested within the combination of cited references and no motivation to make the combination exists.

III. Whether the Examiner improperly rejected Claims 21, 24, 25, and 27 under 35 U.S.C. 102(b) as being anticipated by Pavol where all of the limitations of the claims are not taught within the reference.

IV. Whether the Examiner improperly objected to the drawings not including a “receiver” and a “storage carrier device” where both a receiver and a storage carrier device are clearly shown in the drawings and described in the specification as previously amended.

V. Whether the Examiner improperly failed to enter an amendment to Claims 13 and 14 correcting the claim from which the claims depend and adding a minor clarification to the claims.

7. ARGUMENT

In addition to reasserting the arguments made previously in the Appeal Brief submitted December 17, 2006 and the arguments made in previous responses to office actions, the Appellants argue the following:

I. The Examiner Improperly Rejected Claims 1, 3-11, and 13-30 Under 35 U.S.C. § 112 First and Second Paragraphs as Failing to Comply with the Enablement Requirement and Being Indefinite Because the Specification and Drawings Clearly Identify the Term “Mounting Surface” as Having a Structure and Because One of Skill in the Art Would Easily Recognize How to Construct the Mounting Surface.

INDEPENDENT CLAIMS 1, 9, 18, 21, and 24

A. Independent Claims 1, 9, 18, 21, and 24

The Appellants respectfully submit that independent Claim 1 is representative of the patentable subject matter of Claims 9, 18, 21, and 24. The Appellants respectfully submit that independent Claim 1 is patentable. Claim 1 states:

An enclosure for storing at least one storage device, comprising:

an enclosure chassis;
a **mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay**, the **mounting surface configured to receive a horizontally oriented storage device carrier**, and the **mounting surface having a first layer and a second layer**;

a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the **mounting surface**; and

a receiver secured to the **mounting surface** and configured to retain a first storage device carrier substantially perpendicular to the **mounting surface**. Application at claim 1 (emphasis added).

B. The Rejection under 35 U.S.C. § 112

The Office Action rejected Claims 1, 3-11, and 13-30 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. The Office Action states:

“The claims contains [sic] subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most

nearly connected, to make and/or use the invention. With respect to claims 1, 9, 18 and 24, it is unclear how a surface may form a wall that supports the structure of the device. A surface itself lacks the structural support necessary to reasonably be considered a wall.” Office Action, p. 4

The Office Action rejected Claims 1, 3-11, and 13-30 under 35 U.S.C. § 112, second paragraph, as being indefinite. The Office Action states that:

“[The claims fail] to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claims use the term ‘surface’ in a way that seems improper and renders the scope of the claims unclear. ‘Surface’ is generally defined as a substantially two dimensional external layer. The claims define the mounting surface as a composite of multiple layers.”

Id.

C. Withdrawal of the Rejection under 35 U.S.C. § 112, First and Second Paragraphs

The Appellants respectfully disagree with the Office Action’s characterization of the term “mounting surface” as incapable of being part of a structure or being capable of having layers or other attachments. The MPEP establishes the standard for claim interpretation during prosecution. Claims are to be given their broadest reasonable interpretation. MPEP §2111. In addition, “the words of the claim must be given their plain meaning unless applicant has provided a clear meaning in the specification.” MPEP §2111.01. However, “All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). MPEP §2143.03.

Except in some idyllic sense, perhaps in some theoretical mathematics or science, a surface is an integral part of a structure. Without a structure, a surface only exists in some imaginary two-dimensional world. In the real world, structures have surfaces and by referring to “**a mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay**,” the structure of a wall of the enclosure with a mounting surface is implicit. Application, Claim 1 (emphasis added). Claim 1 also goes further to define the implicit structural wall of the enclosure chassis that has a mounting surface: “**the mounting surface [is] configured to receive** a horizontally oriented storage device carrier, **the mounting surface having** a first layer and a second layer[.]” *Id.* (emphasis added). The second element of Claim 1 also adds a viscoelastic layer to the structure. The third element of Claim 1 attaches a receiver to the mounting surface. *See id.* A mounting surface must have some structure for a device to be attached.

The specification and drawings also add credence to the idea that the mounting surface comprises more than merely a two dimensional, imaginary plane. The mounting surface 112 is shown in the enclosure chassis 102 supporting the interface shelf 122 in Figure 1 and partitioning the “enclosure chassis 102 into a plurality of vertically aligned drive bays 114.” *See id.* at Fig. 1, ¶ 29. In addition, the exploded portion of Figure 1 indicates that the mounting surface 112 comprises a first layer 118, a viscoelastic layer 116, and a second layer 120. *Id.* at Fig. 1, ¶ 32. Claim 1 is intentionally broad to include a structural wall that has a mounting surface, where the mounting surface 112 may include the first and second layers 118, 120, a viscoelastic layer 116, and receivers 115 attached to the mounting surface. *Id.* at Claim 1. Claim 1 may also include the first and second layers 118, 120 with the viscoelastic layer 116 comprising the structure of the mounting surface 112, where the receivers 115 can be mounted to the first and/or second layers 118, 120. *See id.*

One of skill in the art will easily recognize that the mounting surface of Claim 1 has an inherent structure and that the focus of the claim is on the first and second layers 118, 120, the viscoelastic layer 116, the receivers 115, the orientation of the mounting surface 112, and not on detailing every element of the inherent structure that has a mounting surface. *See id.* at Fig. 1, ¶¶ 29-32. Viewing the claims as a whole, one of skill in the art will understand that a “mounting surface” has an implicit structure as defined in the claims. Viewing the claims in light of the drawings and specification, one of skill in the art will clearly understand that the mounting surface of the claims and specification has an implicit structure.

In the alternative to finding an implicit structure associated with a mounting surface, the Federal Circuit and MPEP allow an applicant to act as his own lexicographer, defining a term differently from its ordinary and customary meaning. Manual of Patent Examiner Practice (“MPEP”), 8th ed., rev. 3, § 2111.01; *International Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1361, 1368 (Fed. Cir. 2004). Claim 1 defines “mounting surface” as being oriented vertically, being coupled to the enclosure chassis to form one wall of a drive bay, being configured to receive a horizontally oriented storage device carrier, having a first layer and a second layer, having a viscoelastic layer between the first and second layers, and having a receiver mounted to the mounting surface. Application at Claim 1. The limitations of Claim 1 with regard to the “mounting surface” clearly define the “mounting surface” as more than a two dimensional plane

with no structure. *See id.* The language of the specification also lends credence to the “mounting surface” including more than a two-dimensional plane. *See id.* at ¶ 29, 32.

The Appellants respectfully assert that the 35 U.S.C. § 112 first and second paragraph rejections of Claim 1 are improper and that Claim 1 is in condition for allowance. The Appellants respectfully submit that independent Claim 1 is representative of the patentable subject matter of Claims 9, 18, 21, and 24. Therefore, the Appellants respectfully submit that Claims 9, 18, 21, and 24 are patentable for at least the same reasons as independent Claim 1.

The Appellants request that the rejection of Claims 1, 9, 18, 21, and 24 under 35 U.S.C. § 112, first and second paragraphs, be withdrawn. Such rejections based on a term that has not been amended in any way, after the Examiner has reviewed the claims several times previously, and has had ample opportunity to reject Claim 1 wastes not only the time and resources of the Appellants, but also of the Board of Appeals. The Appellants assert that Claims, 1, 9, 18, and 24 are in condition for allowance. In addition, because Claims 3-8, 10, 11, 13-17, 19-23, and 25-30 depend from allowable claims, the Appellants respectfully request that the rejection of Claims 3-8, 10, 11, 13-17, 19-23, and 25-30 also be withdrawn and be allowed.

II. The Examiner failed to establish a *prima facie* case of obviousness under 35 U.S.C. § 103(a) because the cited references, either alone or in combination, do not teach or suggest all of the limitations of Claims 1, 3-11, 13-20, 22, 23, 26, and 28-30 and no motivation to make the combination exists.

INDEPENDENT CLAIM 1

A. Independent Claim 1

The Appellants respectfully submit that independent Claim 1 is representative of the patentable subject matter of Claims 9, and 18. The Appellants respectfully submit that independent Claim 1 is patentable. Claim 1 states:

An enclosure for storing at least one storage device, comprising:
an enclosure chassis;
a mounting surface **oriented vertically** and coupled to the enclosure chassis to form one wall of a drive bay, the **mounting surface configured** to receive a **horizontally oriented storage device carrier**, and the mounting surface having a first layer and a second layer;
a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface; and
a **receiver** secured to the mounting surface and configured to **retain** a first storage device carrier substantially **perpendicular** to the mounting surface. Application at claim 1 (emphasis added).

B. Rejection of Claims 1, 9, and 18 under 35 U.S.C. § 103(a)

The Final Office Action and Advisory Action maintained a final rejection under 35 U.S.C. § 102(b) of Claims 1, 9, and 18 arguing that Pavol teaches a mounting surface oriented vertically and configured to receive a horizontally oriented storage device carrier. The arguments presented below are directed toward Claim 1, but are also applicable to Claims 9 and 18. Final Office Action, Jul. 20, 2005, pp. 2-3; Advisory Action, Sep. 22, 2005, at pp. 2-3. The Examiner argued in the Advisory Action that:

“... Pavol teaches a carrier that is at least horizontally oriented. The Applicant appears to take the position that in order to fall within the scope of this claim language there cannot be any portion of the carrier that is not horizontally oriented. This would require the carrier to be 2 dimensional which is illogical and a physical impossibility. The claim is open ended, and therefore in order to anticipate the limitations of the claim the prior art

must *at least* teach the limitation claimed. The carrier of Pavol is at least horizontally oriented, or aligned with the horizon, because the top and bottom sides are perpendicular with a vertical axis as clearly shown in the figures.”

Advisory Action at pp. 2-3.

In the Appeal Brief by the Appellants dated December 17, 2005, the Appellants argued that Pavol fails to teach or suggest “a receiver secured to the mounting surface...to retain a first storage device carrier substantially perpendicular to the mounting surface” and “a mounting surface oriented vertically...to receive a horizontally oriented storage device carrier” as recited in Claim 1. Appeal Brief, Dec. 17, 2005, at p.10. The Appellants argued that

“... the storage device carrier be interpreted as a single unit rather than being broken down into constituent parts until a part is located that coincidentally is also oriented with the horizon. Those of skill in the art recognize storage devices and storage device carriers. Storage devices are typically disk drives comprising a set of stacked round platters enclosed within a three-dimensional chassis that is rectangular. The disk drive chassis need not be rectangular, however those of skill in the art recognize that most disk drives are rectangular in order to conserve space and materials. Those of skill in the art also recognize that the horizontal orientation or vertical orientation of a disk drive and/or disk drive carrier is to be measured from the perspective of the front of the disk drive.

“When viewed from the front of the disk drive, the longest edges extend from side to side and the shortest edges extend from top to bottom. Consequently, one of ordinary skill in the art recognizes an axis from one short edge to the other short edge as the axis of orientation. This same axis of orientation is used in reference to the storage device carrier. Consequently, the language in Claim 1 stating that the storage device carrier is horizontally oriented with respect to the mounting surface is clear and clearly distinguished from the vertical orientation of the storage device carrier as taught by Pavol. Appellants submit that the benefits of such an orientation have been explained in previous responses.

“In addition, Claim 1 requires that the receiver retain the storage device carrier perpendicular with respect to the vertically oriented mounting surface. See Claim 1. This requirement reinforces the requirement that the longest edges of the storage device carrier when viewed from the front must align with the horizon because the mounting surface is vertical. The limitation that the mounting surface is vertical is undisputed by the Examiner. Therefore, the language of the claims clearly require that the “mounting surface [is] oriented vertically...to receive a horizontally oriented storage device carrier.” Appeal Brief at pp. 10-11.

The Examiner rejects Claim 1 under 35 U.S.C. 103(a) as being unpatentable over Pavol in view of Anderson. Office Action at ¶ 16. The Examiner claims that “Pavol teaches a mounting surface (interior surface of mounting bay 108 outer surface 128) oriented vertically (the

side walls of the bay are oriented vertically, see Fig. 3) . . . the mounting surface configured to receive a horizontally oriented storage device carrier (106, **the top and bottom of the carrier are oriented with the horizon**, see Fig. 3).” *Id.* The Examiner ignores the limitation that the **receiver** is “secured to the mounting surface and configured to **retain** a first storage device carrier substantially **perpendicular** to the mounting surface.” *See* Claim 1.

C. Withdrawal of the Rejection under 35 U.S.C. § 103(a)

The Appellants respectfully traverse this rejection. The Examiner bears the initial burden of establishing a *prima facie* case of obviousness. MPEP at § 2142. The prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP at § 2142. In the Office Action, the Examiner stated that: “Applicant’s arguments, *see* Appeal Brief, filed 12/22/2005, with respect to the rejection of claims 1, 3-11, and 13-30 under 35 U.S.C. 102 and 103 have been fully considered and are persuasive. Therefore the rejection has been withdrawn.” Office Action at p. 16, ¶ 35. However, the Office Action contradicts itself by further stating that:

“[w]ith respect to the arguments concerning the orientation of the structural components, the Applicant alleges that a certain interpretation (described on pages 10 and 11) is how one of skill in the art would also interpret the claims. However, the prior art of record directly contradicts this view. Pavol states in col. 5, lines 4-15 that, ‘Referring to FIG. 3, resilient layers 126 may also be positioned horizontally along opposing sidewalls 136 of the bay 108 in alternative embodiments.’ Given the teachings of the prior art, the Examiner cannot accept the view presented by the Applicant as the only view one of skill in the art would consider. . . . [T]he teachings of Pavol at least suggest to a worker in the art that orientation is relative within the art. . . . Taking the teachings of Pavol into account, it would seem that within the drive enclosure art the same side of a device might be labeled as horizontal or vertical without affecting the device itself. Therefore the horizontal and vertical limitations of the claims are not given any patentable weight.” Office Action at ¶ 37.

In one sentence the Examiner agrees with the Applicants. Then, the Examiner turns around and cites the same prior art references and substantially the same positions.

The Examiner fundamentally misstates the prior art. Figure 3 of Pavol is merely directed toward placing resilient material 126 and a cover layer 128 on the sides of the drive bay 108 in addition to the top and bottom. *See* Pavol at Fig. 3, col. 5, ll. 4-11. The language cited by the Examiner in Pavol refers only to the *drive bay* 108, not the *drive module* 106 (*see* Fig. 1), yet the Examiner incorrectly states that the language should be used to imply that one of skill in the art

would view a *drive module* 106 (and associated shells 116) as having only relative orientation. The language cited by the Examiner has nothing to do with the orientation of a *drive module* 106. The *drive module* 106 of Figure 3 is shown mounted vertically in the same way the drive module 106 is shown mounted vertically in Figure 1. *See id.* at Figs. 1, 3.

The Appellants respectfully renew their arguments of the previous Appeal Brief with respect to orientation of the mounting surface and storage device carrier. *See* Appeal Brief, pp. 10-11. One of skill in the art would view a storage device and associated storage device carrier, as viewed from a front side (portion protruding from a drive bay), has having an orientation such that a horizontally oriented storage device and carrier would have a long dimension horizontal to the horizon and a short dimension vertical to the horizon. Interpreting all rectangular devices as being oriented vertically and horizontally at the same time by citing the horizontal and vertical surfaces of the device unfairly takes away all ability to claim a particular orientation.

In addition, even if all the claim limitations are taught or suggested by the prior art references, there must be some suggestion or motivation to combine reference teachings to establish obviousness. MPEP §2142. Pavol teaches a drive module 106 with a shell 116 in contact with the cover layers 128 of the resilient layers 126 without a receiver in between the shell 116 and the cover layer 128. Pavol at Fig. 2, col. 3, ll. 23-25, col. 4, ll. 20-35, 60-65. The resilient layer 126 and cover layers 128 directly provide support for the drives 102 and associated shells 116. *Id.* at Figs. 2-6, col. 60-65. Pavol teaches that the resilient layers 126 engage, through the cover layers 128, “a large surface area of the media drive chassis 118.” *Id.* at Fig. 2, col. 5, ll. 16-20. While Pavol teaches that the resilient layer 126 may cover less than 100% of the drives 102, Pavol at col. 5, ll. 20-30, Pavol does not teach, imply, or suggest rails, receivers, or the like mounted to the resilient layers 126 and associated cover layers 128. Anderson includes receivers or rails, Anderson at Fig. 3, but does not teach a mounting surface comprising a viscoelastic layer between two other layers.

Pavol does not teach any suggestion or motivation to add receivers secured to a vertical mounting surface comprising a viscoelastic layer between two other layers to retain a storage device carrier where the mounting surface is perpendicular to the mounting surface. Anderson does not teach any wall of a device bay made of viscoelastic layer between two other layers.

The Appellants respectfully assert that neither Pavol nor Anderson teach all of the

limitations of Claim 1. The Appellants respectfully assert that neither Pavol nor Anderson teach any suggestion motivation to combine the references. The Appellants assert that Claim 1 is in condition for allowance. The Appellants also assert that the arguments above are equally applicable to Claims 9 and 23 and assert Claims 9 and 23 are in condition for allowance.

D. Claims 3-8, 10, 11, 13-17, 19, and 20

Given that Claims 3-8, 10, 11, 13-17, 19, and 20 depend from independent Claims 1, 9, and 18, which are believed to be patentable as described above, the Appellants respectfully submits that the rejection of Claims 3-8, 10, 11, 13-17, 19, and 20 under 35 U.S.C. § 103(a) is moot because Pavol and Anderson fail to teach all the elements of the independent claims as explained above. Accordingly, the Appellants requests that the rejection of dependent Claims 3-8, 10, 11, 13-17, 19, and 20 under 35 U.S.C. § 103(a) be duly withdrawn. As will be seen below, independent claim 21 is believed to be patentable, so the Appellants respectfully assert that claim 23, which depends from claim 21.

In addition, Claims 3, 11, and 18 include an interface shelf 122 that separates upper drive bays from lower drive bays such that inter-bay vibration propagation is inhibited by the void created by the interface shelf 122. Application at ¶ 31. The Examiner rejected Claims 3, 11, and 18 stating that: “Pavol teaches wherein an interface shelf oriented horizontally and coupled to the enclosure chassis (104) such that the interface shelf isolates horizontal storage device bays (108) above the interface shelf from storage device bays below the interface shelf (see Fig. 1 clearly showing a shelf between the upper and lower storage bays).” Office Action at ¶ 20.

The Appellants disagree. The Appellants teach an interface shelf 122 that “provides a void between adjacent drive bays 114 to reduce vibration propagation to the adjacent drive bays 114.” Application at ¶ 31, Fig. 1. The interface shelf 122 is more than a divider between rows of storage devices, as shown in Pavol and Anderson. Pavol at Fig. 1, col. 4, ll. 28-30; Anderson at Figs. 1, 3, col. 3, ll. 28-30, 50-53. The Appellants have defined an interface shelf 122 specifically to include a void. Application at ¶ 31, Fig. 1. Figure 1 clearly shows a void in the interface shelf 122. Neither Pavol nor Anderson teach such a void. The interface shelf 122 is more than merely a divider, but it is an element of the design that provides vibration isolation through its design. The Applications respectfully assert that neither Pavol nor Anderson include

the interface shelf 122 of Claims 3, 11, and 18 and that Claims 3, 11, and 18 are in condition for allowance.

Combination of Pavol, Polch, and Anderson Fail to Teach or Suggest All Claim Elements

A. Claims 22 and 26

The Examiner rejected Claims 22 and 26 under 35 U.S.C. § 103(a) as being unpatentable over Pavol in view of Polch. The Appellants respectfully traverse the rejection. Neither Pavol nor Polch teach or suggest combining concepts found in each or the desirability of such a combination. The prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP at § 2142. In addition, “[t]he teaching or suggestion to make the claimed combination ... must be found in the prior art, not in applicant's disclosure.” MPEP § 2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Appellants submit that Pavol and Polch fail in combination or alone to provide the requisite motivation to combine teachings of each to make a *prima facie* case of obviousness.

As explained above, Pavol fails to teach an interface shelf 122 with a void, consequently the Appellants assert that the combination of Pavol and Polch do not teach all of the limitations of Claim 22. Polch also does not teach an interface shelf 122. In addition, the Appellants find no motivation to combine Pavol and Polch. Pavol does not teach or suggest an enclosure chassis with a viscoelastic layer between a first and second layer. Polch does not teach a suggestion or motivation for a vertical mounting surface with a viscoelastic layer between a first and second layer configured to receive a horizontally oriented storage device carrier. The Appellants respectfully assert that Claims 22 and 26 are in condition for allowance.

B. Claims 7 and 15

The Examiner rejected Claims 7 and 15 under 35 U.S.C. § 103 as being unpatentable over Pavol in view of Anderson and in further view of Polch. The Appellants respectfully traverse the rejection. As described above in relation to Claim 1, Pavol and Anderson fail to teach a *vertical* mounting surface comprising a viscoelastic layer between a first and second layer with an attached receiver configured to retain a *horizontal* storage device carrier substantially *perpendicular* to the mounting surface. In addition, neither Pavol nor Anderson teach or suggest an enclosure chassis with a viscoelastic layer between a first and second layer. Polch does not

teach or suggest a mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay, the mounting surface configured to receive a horizontally oriented storage device carrier, the mounting surface having a first layer and a second layer. Polch does not teach or suggest a mounting surface with a viscoelastic layer between a first and second layer and does not teach a receiver secured to the mounting surface and configured to retain a first storage device carrier substantially perpendicular to the mounting surface. The Appellants assert Claims 7 and 15 are in condition for allowance.

Combination of Pavol, Anderson, and Bell Fail to Teach or Suggest All Claim Elements

A. Claims 18 and 28-30

The Examiner rejected Claims 18 and 28-30 under 35 U.S.C. § 103(a) as unpatentable over Pavol in view of Anderson and in further view of Bell. Neither Pavol, Anderson, nor Bell teach or suggest combining concepts found in each or the desirability of such a combination. As “[t]he teaching or suggestion to make the claimed combination ... must be found in the prior art, not in applicant's disclosure,” MPEP 2143, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991), Appellants submit that Pavol, Anderson and Bell fail in combination or alone to provide the requisite motivation to combine teachings of each to make a *prima facie* case of obviousness. As explained in relation to Claim 1, Pavol, Anderson, and Bell fail to teach a mounting surface with a viscoelastic layer between a first and second layer configured to receive a storage device carrier substantially perpendicular to the mounting surface. Consequently the Appellants find no motivation to combine Pavol with any of the references because this recited element would be lacking. In addition, there is no teaching or suggestion in Pavol, Anderson, or Bell to combine the references. The Appellants assert that Claims 18 and 28-30 are in condition for allowance.

B. Claims 19 and 20

The Examiner rejected Claims 19 and 20 under 35 U.S.C. § 103(a) as unpatentable over Pavol in view of Bell. Neither Pavol nor Bell teach or suggest combining concepts found in each or the desirability of such a combination. As “[t]he teaching or suggestion to make the claimed combination ... must be found in the prior art, not in applicant's disclosure,” MPEP 2143, citing

In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991), Appellants submit that Pavol and Bell fail in combination or alone to provide the requisite motivation to combine teachings of each to make a *prima facie* case of obviousness.

Given that Claims 19 and 20 depend from independent Claim 18, which is believed to be patentable as described above, the Appellants respectfully submits that the rejection of Claim 19 under 35 U.S.C. § 103(a) is moot because Pavol, Bell, and Anderson fail to teach all the elements of the independent claims as explained above. The Office Action suggests that Anderson teaches a clip-on spring as recited in Claims 19 and 20. Office Action at ¶ 33. The Office Action suggests that one of skill in the art would combine Pavol, Bell, and Anderson to produce an apparatus that includes the clip-on springs. The Appellants disagree. Anderson teaches away from clip-on springs. Anderson teaches that the springs are mounted using bolts. *See* Anderson at Fig. 4, col. 3, ll. 64-65. The Appellants disagree that Anderson's reference to other mounting means (Anderson at col. 4, ll. 66-67) constitutes a teaching sufficient for one of skill in the art to produce clip-on springs as recited in Claims 19 and 20. Accordingly, the Appellants requests that the rejection of dependent Claims 19 and 20 under 35 U.S.C. § 103(a) be duly withdrawn.

III. The Examiner Improperly Rejected Claims 21, 24, 25, and 27 under 35 U.S.C. § 102(b) as Being Anticipated by Pavol Where All of the Claim Limitations are Not Taught by Pavol

A. Claims 21, 24 and 25

The Examiner rejected Claims 21, 24 and 25 as being anticipated by Pavol. Office Action at ¶¶ 11-13. The Appellants disagree. “Anticipation under 35 U.S.C. §102 requires the disclosure in a single piece of prior art of each and every limitation of a claimed invention. ...Whether such art is anticipating is a question of fact.” *Apple Computer, Inc. v. Articulate Systems, Inc.* 234 F.3d 14, 20, 57 USPQ2d 1057, 1061 (Fed. Cir. 2000). As explained in relation to Claims 3 and 11, Pavol does not teach an interface shelf as defined in the claims and specification. The Appellants respectfully assert, therefore, that Claims 21 and 24 are not anticipated by Pavol and are allowable. In addition, because Claim 25 depends from Claim 24

and the Appellants believe Claim 24 is allowable, the Appellants assert that Claim 25 is also allowable.

B. Claim 27

The Examiner also rejected Claim 27 as being anticipated by Pavol. Office Action at ¶ 14. Claim 27 depends from Claim 24, which the Appellants assert is allowable. Therefore, the Appellants also assert that Claim 27 is allowable. In addition, as explained in relation to Claim 1, Pavol does not teach a receiving means coupled to the mounting surface for receiving a storage device carrier perpendicular to the mounting surface. The Appellants assert Claim 27 is allowable.

IV. The Examiner Improperly Objected to the Drawings for Not Including a Receiver and a Storage Carrier Device Where Both a Receiver and a Storage Device Carrier are Clearly Shown in the Drawings and Described in the Specification

The Examiner objected to the drawings and stated that “the ‘receiver’ and ‘storage device carrier’ as defined in claim 23 must be shown or the features cancelled from the claims.” Office Action at ¶ 2. Figure 1, as amended, clearly indicates a receiver 115 on the mounting surface 112. Application at Figure 1. The Appellants amended the specification and drawings in the Office Action Response dated May 18, 2005. The Examiner acknowledged the amendment in the Final Office Action mailed July 20, 2005. The Examiner accepted the drawings on the Office Action Summary sheet. The Final Office Action made no objection to the amendments to the specification. Paragraph 29 of the Application, as amended, clearly describes the receiver 115 as follows:

“The mounting surfaces 112 include a receiver 115 secured to the mounting surface 112. The receiver 115 is configured to receive a storage device carrier retaining a disk drive. The receiver 115 positions the storage device carrier relative to the mounting surface(s) 112. The storage device carriers engage the mounting surfaces 112 by way of the receiver 115. In one embodiment, the receiver 115 comprises a pair of rails that engage the storage device carrier.”

Application at ¶ 29.

Figures 3 and 5 clearly show the storage device carrier 300, which is identified and described in paragraphs 35 and 40. Application at Figs. 3, 5, ¶¶ 35, 40. The Appellants assert that the objection to the drawings is improper and respectfully request the withdrawal of the objection.

V. The Examiner Improperly Failed to Enter Amendments to Claims 13 and 14

The Examiner refused to enter a minor amendment to Claims 13 and 14 in the Advisory Action stating that the amendments would require a further search. The amendments to Claims 13 and 14 were made in the Final Office Action and only changed the claims to depend on Claim 9 and added a minor clarification. Claims 13 and 14, as amended, state:

13. The system according to claim ~~12-9~~, wherein the first storage device carrier is mounted on one side of the mounting surface by way of the first receiver, and the second storage device carrier is mounted to an opposite side of the mounting surface by way of the second receiver.

14. The system according to claim ~~12-9~~, wherein the first storage device carrier is mounted on one side of the mounting surface by way of the first receiver, and the second storage device carrier is mounted on the same side of the mounting surface by way of the second receiver.

The Office Action objected to Claims 13 and 14 for depending on a cancelled claim. The Appellants respectfully assert that because prosecution has been reopened, the amendment should have been entered by the Examiner. In addition, even if the Examiner objects to the added text, the amendment to change the claim from which Claims 13 and 14 depend should have been entered.

SUMMARY

In view of the foregoing, each of the claims on appeal has been improperly rejected because the enablement and indefiniteness rejections were improper and the Examiner has not properly established a *prima facie* case of anticipation or obviousness for Claims 1, 3-11, and 13-30. The Appellants submit that the foregoing arguments establish the novelty and non-obviousness of the claims of the present application and that the claims are enabled and not indefinite. Therefore, the Appellants respectfully request reversal of the Examiner's objection and rejection under 35 U.S.C. §§ 112, 102(b), and 103(a) and allowance of pending Claims 1, 3-11, and 13-30. Accordingly, the Appellants submit that Claims 1, 3-11, and 13-30 are patentable. In addition, the Appellants submit that the drawing objections were improper and should be withdrawn. The Appellants also submit that the amendments to Claims 13 and 14 should be entered.

Respectfully submitted,

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8. CLAIMS APPENDIX

The claims involved in the appeal, namely Claims 1, 3-11, and 13-30, are listed below.

1. An enclosure for storing at least one storage device, comprising:
 - an enclosure chassis;
 - a mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay, the mounting surface configured to receive a horizontally oriented storage device carrier, the mounting surface having a first layer and a second layer;
 - a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface; and
 - a receiver secured to the mounting surface and configured to retain a first storage device carrier substantially perpendicular to the mounting surface.
2. (Canceled).
3. The apparatus according to claim 1, further comprising an interface shelf oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf.
4. The apparatus according to claim 1, further comprising a second receiver secured to the mounting surface, the second receiver configured to retain a second storage device carrier.
5. The apparatus according to claim 4, wherein the mounting surface is configured to receive the first storage device carrier on one side of the mounting surface and the second storage device carrier on an opposite side of the mounting surface.

6. The apparatus according to claim 4, wherein the mounting surface is disposed to receive the first storage device carrier on one side of the mounting surface and the second storage device carrier on a same side of the mounting surface as the first storage device.

7. The apparatus according to claim 1, further comprising a viscoelastic layer disposed between a first layer and a second layer of the enclosure chassis.

8. The apparatus of claim 1, wherein the storage device is a disk drive.

9. A system for storing at least one storage device, comprising:

an enclosure chassis;

a mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay, the mounting surface having a first layer and a second layer and a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface;

a first and second storage device carrier configured to retain a storage device therein; and

a first and second receiver secured to the mounting surface, the receivers configured to receive and retain the storage device carriers substantially perpendicular to the mounting surface.

10. The system according to claim 9, wherein the storage device carrier further comprises a clip-on spring configured to resiliently couple the storage device carrier between the mounting surface and the receiver, the clip-on spring having first and second ends configured to engage one of the storage device carrier and the mounting surface.

11. The system according to claim 9, further comprising an interface shelf oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf.

12. (Canceled).

13. The system according to claim 12, wherein the first storage device carrier is mounted on one side of the mounting surface, and the second storage device carrier is mounted to an opposite side of the mounting surface.

14. The system according to claim 12, wherein the first storage device carrier is mounted on one side of the mounting surface, and the second storage device carrier is mounted on the same side of the mounting surface.

15. The system according to claim 9, further comprising a viscoelastic layer disposed between a first layer and a second layer of the enclosure chassis.

16. The system of claim 9, wherein the storage device is a disk drive.

17. The system of claim 10, wherein the clip-on spring comprises at least three layers including at least one viscoelastic layer.

18. A system for storing at least one storage device, comprising:

an enclosure chassis;

a mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay, the mounting surface having a first layer and a second layer and a viscoelastic layer disposed between the first layer and the second layer to reduce vibration propagation throughout the mounting surface, the

mounting surface configured to receive and retain less than three storage device carriers substantially perpendicular to the mounting surface;

an interface shelf oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf;

a storage device carrier including a bezel, the storage device carrier configured to retain a storage device therein, the storage device having a storage device interface; and

a key removably secured to at least one of two positions on the bezel, such that placement of the key into one of the two positions prevents the storage device interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis.

19. The system of claim 18, further comprising at least one clip-on spring coupled to the storage device carrier, the clip-on spring configured to flexibly couple the storage device carrier to the mounting surface, the clip-on spring having first and second ends configured to engage one of the storage device carrier and the mounting surface.

20. The system of claim 19, wherein the clip-on spring comprises at least three layers including at least one viscoelastic layer.

21. A method for reducing vibration originating from at least one storage device, comprising the steps of:

providing an enclosure chassis configured to store at least one storage device;

providing a mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay, the mounting surface configured for receiving a horizontally oriented storage device carrier;

providing a first layer on the mounting surface;

providing a second layer on the mounting surface; and

providing a viscoelastic layer disposed between the first and second layer of the mounting surface for reducing vibration propagation throughout the mounting surface; and

providing an interface shelf oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf.

22. The method according to claim 21, further comprising the steps of:

providing a first layer on the enclosure chassis;

providing a second layer on the enclosure chassis; and

providing a viscoelastic layer disposed between the first and second layer of the enclosure chassis, for reducing vibration propagation throughout the enclosure chassis.

23. The method according to claim 21, further comprising the steps of:

providing a storage device carrier for retaining a storage device;

securing a receiver to the mounting surface for receiving the storage device carrier; and

coupling at least one clip-on damped spring to the storage device carrier, for resiliently coupling the storage device carrier between a receiver formed in the mounting surface and the mounting surface.

24. An apparatus for reducing vibration originating from at least one storage device, comprising:

an enclosure chassis configured to store at least one storage device; a mounting surface oriented vertically and coupled to the enclosure chassis to form one wall of a drive bay, the mounting surface configured to receive less than three horizontally oriented storage device carriers and having a damping means for damping the vibrational energy generated by the storage device and received by the mounting surface; and

an interface shelf oriented horizontally and coupled to the enclosure chassis such that the interface shelf isolates horizontal storage device bays above the interface shelf from storage device bays below the interface shelf.

25. The apparatus according to claim 24, wherein the damping means comprises a first layer, a second layer, and a viscoelastic layer between the first layer and the second layer.

26. The apparatus according to claim 25, wherein the viscoelastic layer is a damping adhesive.

27. The apparatus according to claim 24, further comprising a receiving means coupled to the mounting surface for receiving and retaining a storage device carrier perpendicular to the mounting surface.

28. The apparatus according to claim 24, wherein the storage device carrier comprises:

a bezel secured to the storage device carrier and configured to lock the drive carrier within the enclosure; and

a keying means, attached to the bezel, for preventing a storage device carrier, with one type of interface, from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis.

29. The apparatus according to claim 28, wherein the keying means for keying a storage device carrier comprises a key removably secured to at least one of two positions on the bezel, and wherein the placement of the key into one of the two positions prevents the storage device carrier interface from contacting an incompatible interface upon inserting the storage device carrier into the enclosure chassis.

30. The apparatus according to claim 28, wherein the keying means for keying a storage device carrier comprises a groove in the enclosure chassis configured to receive the key.

9. EVIDENCE APPENDIX

There is no material to be included in the Evidence Appendix.

10. RELATED PROCEEDINGS APPENDIX

Appeal Brief for the present Application submitted on December 17, 2005.